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THOMAS G. NEWMAN, EDITOR.

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EDITORIAL BUZZINGS.

The Rush is now all over, and here, at least, all orders for goods are filled. We hope the *experience* of the past few months will not soon be forgotten by those who have had to wait for necessary supplies, which should have been ordered and in the apiary ready for use three or four months ago. Those who delay ordering such until they are needed for use, have had some experience that should be valuable to them. We have now resumed our usual promptness in filling orders.

Bees as Weather Prophets.—A new use may possibly be found for bees. Not only are they treasurers of golden liquid sweets, but it appears that they may be recognized as weather harbingers—but how far into the mysterious and almost impenetrable future the little bee may be able to look, is doubtless a question in the opinion of many. An exchange says this on the subject:

A nice observer by looking at the bees in the early morning, during the working season, will soon be able to form an opinion as to what the day will be, and that almost to a certainty, for they will sometimes appear sluggish and inactive, although the morning is very bright, and showing every appearance of a clear day, but the sun soon becomes clouded, and rain follows; and, again, the morning may be dull and cloudy, and sometimes rain may be falling, still the bees will be observed going out in considerable numbers, and as sure as this is seen, the day becomes bright and fair.

Thus are bees the objects of ever-increasing interest to all who will study their wonderful ways and works.

Supply Dealers who desire to handle a good Bee-Veil, should write for our dozen rates on the "Globe" Bee-Veils, to sell again.

Statistics.—It will be remembered that two years ago we printed considerable correspondence between several apiarists and Mr. J. R. Dodge, Government Statistician at Washington. Mr. Dodge promised to gather statistics and have them published in the Governmental Reports if we could get volunteers to report regularly. These were called for and obtained, and we sent the list of names and addresses to Mr. Dodge. After waiting about 20 months for some results, we wrote to that gentleman, and here is his reply:

U. S. DEPARTMENT OF AGRICULTURE,
Division of Statistics,
WASHINGTON, D. C., July 19, 1890.

Thomas G. Newman, Chicago, Ills.,

Dear Sir:—I am in receipt of your favor of the 17th inst., recalling to my memory our correspondence of 1888–89, relative to the collection and publication of statistics of honey and bee-keeping.

You will recollect that I stated that such data could only be obtained from special correspondents actively engaged in the industry, and that I must depend upon those desirous of getting such data for a list of reporters. Through your efforts, and through my own, by all channels at my command, I was able *only* to obtain a list of a little more than 200 names of persons sufficiently interested to make regular reports. From data obtained from this number, I prepared a very brief and general article upon the condition of the industry, but I do not feel justified in presenting any statistics for record based upon such a small number of returns.

I was anxious then, and now, to present in our montly reports as much miscellaneous data as possible, upon special and minor agricultural industries, but it is necessary that those interested should give us their active co-operation. This, bee-keepers as a whole, failed to do, and you will readily agree with me that it is far better to present no statistics than to present those which might not be wholly correct. Two hundred names average less than one for every ten counties in the United States. Very respectfully,

J. R. DODGE, *Statistician.*

Since these names of correspondents were sent to Mr. Dodge, Mr. A. I. Root, of Medina, O., has organized such a bureau of statistics, and the United States Honey-Producers' Exchange (G. H. Knickerbocker, of Pine Plains, N. Y., Secretary,) are in the same line of business. We can well afford to let them have full charge of the matter. The former is published to the world as soon as gathered; the latter is *private*, and only intended for members.

Going Away.—Mr. C. Weckesser, of Marshallville, O., presents a rare opportunity for some apiarist to get a nice business location and home. He says:

Owing to a very excellent business opening at another place, I wish to dispose of my apiary and queen-rearing business here. I have about eight acres of land, house and other buildings, and an apiary of about 100 colonies; fruit, berries, and some nursery stock in ground. To make a quick sale, I will sell at $1,700, queen-rearing plant included. The location is very fine, and it is *a bargain.*—CHRISTIAN WECKESSER

African Bees on the Rampage.—Lieut. von Tridemann, of the German Expedition in Africa, relates an interesting incident, which has been translated from the Leipzig *Bienen-Zeitung* for July, 1890, by the Rev. S. Roese. It was written by that officer in a letter to the German Colonial *Gazette*, published at Witta, Africa. It reads thus:

On regulating matters after a wearisome journey to give man and beast the position of rest and comfort, I intended to retire for a few brief moments to myself. When all of a sudden a terrible confusion and noise came to my notice. The animals were bellowing and running in wild confusion in all directions, except one goat which was tied up and could not escape. A swarm of bees had taken possession of the camp, driving everything before it.

The poor goat was completely covered with infuriated bees. At first she uttered a most pitiful noise, when at last she bent her head down, seemingly resigned to her fate.

Doctor Peters advised the shooting of the poor animal to relieve her suffering. Lieut. von Tiedemann, however, desirous of saving the animal's life, crept up and cut the rope, but not without receiving two severe stings, which caused him most terrible pain. He pulled the goat near the camp-fire, and in the evening she accepted her usual rations. One of the asses, however, died from the effects of the stings.

☞ An article on "Double-Walled *vs.* Single-Walled Hives for Winter," was written for the AMERICAN BEE JOURNAL by Dr. G. L. Tinker, and published on page 78 of the issue for Feb. 1, 1890. That article was afterwards copied bodily by the *Michigan Farmer*, but neither credited to the BEE JOURNAL nor to the author. Then a periodical "down East" copied it and innocently and honestly credited it to the *Michigan Farmer*. This is but a sample of the *stealing* which is continually going on by some of the agricultural papers. There are many honorable exceptions, however, whose editors would scorn to copy an article without giving proper credit.

The Detroit Fair and Exposition will open on Aug. 26 and close Sept. 5. The Apiarian Department is expected to be very attractive. The award of premiums is to begin on Wednesday, Aug. 27. The editor of the AMERICAN BEE JOURNAL intends to be present and serve as judge, and hopes to meet many apiarists there.

Posters for the AMERICAN BEE JOURNAL, printed in two colors, will be sent free to all who can use them. They are handsome, and will "set off" an exhibit at Fairs. It will tell bee-keepers how to subscribe, for "Subscriptions Received Here" is quite prominent at the bottom.

We will also send sample copies of the BEE JOURNAL, for use at Fairs, if notified a week or ten days in advance where to send them.

GLEAMS OF NEWS.

The Work of a Tornado.—Here is another description of the destructive work of the Tornado mentioned last week on page 500:

The terrible tornado that passed over this section of the country on the evening of July 12, brought death and destruction to this city. All factories are shut down, business houses are closed and draped in crepe; on the firemen's houses and other places flags are placed at half mast, and a great cloud of grief hangs over the whole city. The loss of property receives but little thought, but the terrible catastrophe on Lake Pepin is the cause of the gloom. The steamer "Sea Wing" capsized by the gale, on Lake Pepin, about 14 miles below this city, just off Maiden Rock Point.

The steamer was carrying a large excursion party, of which over 100 were drowned, nearly all of them being from Red Wing. Lake Pepin in the widest place is 3 miles, and 25 miles long, and is known to be one of the most treacherous bodies of water in the Northwest.

Mr. Allen Adams, a highly-esteemed and well-to-do farmer, whose friends are all who know him, and who served his country long and well during the Rebellion, and has been one of our most successful bee-keepers for over 30 years, had the sad misfortune to lose his three oldest children in the "Sea Wing" disaster, being one son and two daughters. A number of large families were almost entirely lost, only one or two being left to mourn the loss of the rest—in fact, this is a time never to be forgotten by Red Wing people.

Bees suffered very little, as far as I can learn. I had but one hive blown over, as they were so well sheltered. Only one tree blew down in my apiary, and that fell in the aisle, and did no harm. Very many of the bees in this section will do very little this season in the way of storing surplus, but by feeding I have been able to keep my colonies strong, and now most of them are storing surplus from linden bloom, which is very heavy, indeed.

So far as I can learn nearly all the drones were killed off in this section of country from June 10 to June 20. I have had but two new swarms, and but little signs of any for some time to come, as the bees are rearing drones very slowly, and working very strong. The country is full of bloom now, and I am in hopes it will continue. Then should we get a fall crop, we may do fairly well with our bees yet; but we had so much cold and wet weather during the spring, that bees have not been able to even make a living, and spring dwindling has simply been terrible. Robbing also has been a very great annoyance to bee-keepers here the past spring, and those having the most bees are bothered the worst. Quite a good many new swarms are going to the woods, on account of the bees swarming so little, and not watched so closely. G. N. BENHAM.

Red Wing, Minn., July 14, 1890.

If you Want a treat in hot weather that those who have been accustomed to it think superior to ice-cream, get some freshly clabbered whole milk, and fill a soup-plate with it, then pour extracted honey over the surface, and grate a little nutmeg over it, and, if you can, add a little rich sweet cream, and then—please send for us.—*American Dairyman.*

Southern California.—The *Rural Californian* of last month contained the following item relative to Redlands, Calif., as a country for bees:

The report comes to us pretty straight that one man near Redlands captured over 100 runaway swarms of bees. Any smart man ought to be able to start an apiary in that nick of woods, and getting such an early start in the season he ought to make money enough to start a bank. We knew that Redlands was a good place to live in, but had no idea that so many bees had found it out.

That is where our neighbors, Mr. Horace Sloan and family went. They were lovers of honey, and the "attraction" there is no doubt accounted for by the above item.

Southern California beats the world for bees and honey-production, as will be seen from the following item, also gleaned from the same paper as the above:

There has been more natural swarming of bees in Southern California during the month of May than any season since 1876, and some of the swarms were monsters, too big to talk about; well, as large as a boy, so to speak!

If you measure the boy by his own estimation of himself, Bro. Wilson, the swarms are giants, "so to speak!"

Bumble-Bees.—Mrs. L. Harrison, in the *Prairie Farmer*, gives the following good advice about not disturbing the nests of bumble-bees because of the value to the crops of these large bees:

Farmers, do not burn up all the nests of the bumble-bees, for they are worth $20 to you in fertilizing red clover blossoms, thereby insuring a heavy crop of seeds. In Australia there are no bumble-bees of our kind, and they could not raise clover seed there until they imported some. That fertilization by insects is necessary for the development of seeds, is shown in that showy flower, "bleeding-heart" (*Dicentra spectabilis*), which produces no seed, for its fertilizing moth has never been imported from North China, its native habitat.

Honey-Vinegar.—We are frequently asked as to the proper way to make honey-vinegar out of what might easily be wasted in any well-conducted apiary, and even from the poorer grades of honey, which are not usually in demand. In the following paragraphs the desired information may be found, which seems to have been written by one who knows:

One pound of honey and one gallon of water are the proper proportions to make a good vinegar. That is, 29 pounds of honey will make (water enough being added to fill a regular 32-gallon barrel) one barrel of the best vinegar. The vessels used to make it in are common alcohol barrels which are found at drug-stores. Saw out one of the barrel-heads, and paint the outside, to prevent the iron-hoops from being destroyed by the vinegar. The barrels and vinegar are kept in the cellar, so covered with burlap as to keep the dust out and let the air in.

One year converts this water and honey into the choicest vinegar. More age will make it sharper, but at one year old it is fine enough for any use. Sweetened water from washing honey drippings is the most common waste of the apiary, and to utilize it is presumed to be the desirable matter in connection with honey-vinegar. Still, with the low price of honey, bee-keepers may find a reasonable outlet for some of their poor honey, such as is unfit to sell as a luxury for table use.

The Pleasure of having the necessary supplies at hand, ready for use, is smilingly described in the following letter. Now the rush is over, and we can moralize over the matter, and see the "funny" side. The correspondent says:

I have been feeling good over that lot of sections I got last fall; and I felt just like sitting down and having a good laugh at the situation, while you was in your "big muddle." I tell you, it makes one feel good to know that he is all ready for any emergency, and has everything fitted up and at hand. But the laugh is over on the other side of the face after all. The clover has only barely sustained the bees, and this is now the fourth season since we have seen an ounce of clover honey. What very little has been stored is from figwort and ball willow. The latter, by the way, is not a bad honey-plant, and is a very sure crop. The honey is very white, and I think pretty good quality also. The time of bloom follows up the clover closely, while the appearance of the honey is so near like it that they will do to work together for comb honey; the willow is a shade lighter than clover. The increase, so far, is from 57 to 93 colonies. Only the Carniolan bees have stored any surplus comb honey, but I have extracted a little from some of the rest; though not more than from 100 to 125 pounds. W. M. WOODWARD.

Bonfield, Ills., July 24, 1890.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely introduce* any Queen, at any time of the year when bees cay fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for "Doolittle's Scientific Queen-Rearing;" a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, $1.00.

Handling Bees.—This is the title of a nice pamphlet containing 28 pages and a cover, published by Chas. Dadant & Son. It is a chapter from their book, Langstroth Revised, and is an excellent thing for beginners. Price, 8 cts. For sale at this office.

Bees, Flowers and Love.

Do I love her?
Does the earth love the sun
That it feeds upon?
Does the moon love the earth
In its circling girth?
Do the stars love the sky
As they pale and die?
Does the field love the rain
On its parched grain?
Does the fish love the sea
Where its life must be?
Does the dove love its mate
As it coos elate?
Do the bees love the flowers
They cling to in bowers?
Does the babe love the breast
By its liplets pressed?
Does a man love his soul
In his dying dole?
Does the mouth love the kiss
In its breath of bliss?
Does young love love its dream
Of a love supreme?
More than all these loves stir
Do I love her!

—WILLARD FISKE.

QUERIES AND REPLIES.

Uncapped Honey Absorbing Poison from Bees' Breath.

Written for the American Bee Journal

QUERY 720.—Why does uncapped honey in the comb take up poison from the bees' breath, when candy or flattened sugar will not while being melted, as I suppose, by the breath of the bees?—Mich.

Does it?—C. C. MILLER.

I do not think it does.—A. J. COOK.

I cannot tell you. I am not posted in that matter.—JAMES HEDDON.

I think that you assume what is not true.—R. L. TAYLOR.

That's a "stunner." Ask James Heddon.—J. M. HAMBAUGH.

Do you not believe you have a wrong idea of this matter?—H. D. CUTTING.

It does not. Your conclusion is based upon false premises.—J. P. H. BROWN.

Who did imagine that the breath of bees poisons the uncapped honey?—DADANT & SON.

It is unwise to attempt to account for a thing that may have no existence.—M. MAHIN.

I do not believe that it does so at all.—C. H. DIBBERN.

Prove that it does before you ask the question "why?"—MRS. L. HARRISON.

I do not think that uncapped honey takes off poison from the bees. Imagination sometimes goes a long ways.—G. L. TINKER.

Are you sure that a bee's breath contains poison? It breathes the same air that we do. That the breath of the bee poisons honey is something new to me.—G. M. DOOLITTLE.

I did not know that honey does "take up poison from the bees' breath." This, if true, is strange; and strange, if true.—J. M. SHUCK.

I was not aware that "the bees' breath" was poison enough to affect the honey; and "flattened sugar" is, to me, a new commodity. Is "Mich." giving us "taffy?"—A. B. MASON.

Does "uncapped honey take up poison from the bees' breath?" I do not believe it. If the poison is in bees' breath as well as in the posterior anatomy, it is a surprise to me.—EUGENE SECOR.

I do not understand the above question. In fact, I do not know anything about the idea attempted to be conveyed. I did not know that bees' breath was poisonous; neither do I believe that it is.—J. E. POND.

I do not know that it is "so." Honey gets its formic acid from the affluvium thrown off in the natural way from the bodies of the bees, but I do not regard formic acid, imparted in this way, "poison in honey." When you open a hive, you can smell formic acid; of course the liquid honey will absorb a little of it, which I think is a wise provision in nature.—G. W. DEMAREE.

This question is but a senseless jargon of words—conveying no intelligent idea, and having no foundation in fact, experience or truth! From beginning to end, it is but a supposition—a "vain imagination"—nothing more!—THE EDITOR.

Extreme Age when Queens have Been Known to Mate.

Written for the American Bee Journal

QUERY 721.—1. How old was the oldest queen when mated, that you have ever known of? 2. Is six weeks too old for queens to be mated?—New York.

I have no experience.—EUGENE SECOR.

1. Thirty days. 2. Ordinarily, yes.—J. M. SHUCK.

1. I have no record. 2. I think so.—MRS. L. HARRISON.

1. About 21 days. 2. Yes.—R. L. TAYLOR.

Please ask me this question later.—H. D. CUTTING.

1. We did not notice it. 2. We think that six weeks is too much.—DADANT & SON.

I do not know anything about this. Ask the queen-rearers.—C. H. DIBBERN.

I cannot give exact figures, but if a queen did not lay at six weeks old, I would smash her at three weeks old.—C. C. MILLER.

1. About ten days. 2. I believe it is. I have had non-fertile queens laying at less than three weeks old.—A. B. MASON.

1. I have known them to mate and become good queens 12 days after coming from the cell. 2. I should fear a delay even of two weeks.—A. J. COOK.

1. I think that early in the spring I have had queens mated that were three weeks old. 2. I should have no hope of the mating of a queen so old as that.—M. MAHIN.

1. I am not sure on this point. 2. I doubt if a queen deprived of her nuptial flight over two weeks, can be relied upon.—J. M. HAMBAUGH.

1. Thirty days old. She did not prove very prolific. 2. Six weeks may not be too old for them to mate, but I think that they would be worthless.—G. L. TINKER.

1. Well, I cannot say, but from 20 years of close observation I have found that queens, if mated after 17 days old, are of no account. 2. Yes. The exceptions would be anomalous.—J. P. H. BROWN.

1. I do not know. 2. As a rule, most surely; still it is barely possible. I should myself, however, consider it time thrown away to wait for the chance of mating with such a queen.—J. E. POND.

1. Twenty days. 2. Such a queen would not be worth keeping, if she should mate at that age. Queens usually mate when from 5 to 7 days old.—G. M. DOOLITTLE.

1. I do not remember of ever having a queen fertilized after her age had much exceeded the ordinary time. I may have, and forgotten it. 2. Yes, a good deal too old.—JAMES HEDDON.

1. Eighteen days, and she proved a failure. 2. Yes, in my opinion, and I have observed and experimented in this line no little. A queen is not worth much if not mated by the time she is 10 days old. Nature is wonderful in her provisions. I have had queens mated in the late autumn, that did lay eggs until the following spring. Perhaps they laid a little at the start, but their eggs were neglected by the workers.—G. W. DEMAREE.

Foul Brood.—A correspondent asks us to describe this disease in the BEE JOURNAL, and to tell how to detect its first appearance:

What is erroneously called foul brood is a disease which attacks not only the brood (sealed and unsealed), but also the full-grown bees, and even the queen is sometimes affected by it. It is usually said that "you will always find the cells sunken, and a small hole the size of a pin head in the centre of the comb looking brown and bad;" that the "foul stench arising from the diseased colony" will indicate the disease, but there are so many different shades and kinds of the disease that these are not the only indications. Sometimes brood, which to all outward appearance is sound and healthy, upon closer inspection will reveal the disease which has not yet attained the condition of sickening stench which is found in brood thoroughly ropy and rotten. When it has reached the latter condition, the only remedy we advise is to utterly consume bees, hives, combs and honey.

In the milder forms of the disease, pure phenol is no doubt the best remedy. But as it is difficult to obtain the pure article except at the large wholesale dealers, it can be obtained at the office of the AMERICAN BEE JOURNAL. One drop to 500 drops of the syrup as the formula recommended by Mr. Cheshire, as will be seen by the following from his pamphlet:

"I found that 1-200 (that is one part of pure phenol to 200 parts of syrup) was refused by the bees altogether; that 1-400 might be given constantly to a sound colony without appearing to limit the queen in breeding, *or touch her health*; that 1-750 dispatched foul brood quickly, even while honey was coming in; and that 1-500 appeared enough when it was not. I have established these quantities as the correct ones." Moderate quantities are, therefore, not injurious.

CORRESPONDENCE.

FOUL BROOD.

Origin of this Dread Malady Among Bees.

Written for the American Bee Journal

BY C. J. ROBINSON.

While reading Prof. Cook's "Bulletin" on page 350, I felt constrained to record exceptions to some of his teaching—hence I review points contained therein. He discusses "fungoid in general." It is not possible to even open such a discussion understandingly in the limits of a weekly periodical, nor can a full review come within such limited space. The Professor records his conclusions, based on theories alone; at least, he failed to support his doctrine by evidence or plausible reasoning.

Concerning fungoid, Prof. Cook would fain have the laity apprised that "science has unveiled the mysteries of the tiny destroyers (bacteria), and revealed the sword that lays them low!" Were such the fact, we should rejoice over our deliverance from the thraldom of fungoid. Notwithstanding he proclaims that a sword is revealed that lays fungoid low, the records show that the bills of mortality from fungoid diseases have not been reduced in numbers—such diseases as Prof. Cook declares is the result of fungoid. He tells his readers this:

> Foul brood, like the Asiatic cholera, tuberculosis, swine-plague, etc., is the result of the growth and development in the animal tissues of myriads of very minute microscopic plants (called fungoid), which are called micro-organisms, or microbes. The disease (which ?), like consumption, Asiatic cholera, swine and chicken cholera, etc., which result from the presence in the tissues of such organisms, are called "fungoid," as the organisms that produce them are fungi, which reproduce by division or fission.

Perhaps all bee-keepers do not understand fully the term—"tissue." All living bodies are made up of tissues—there is no organ which has not this peculiarity. The *bones*, as well as the flesh and fat, are composed of tissues, and all alike are made up of cells.

A variety of tissues enter into the composition of an animal structure. All living bodies throughout are pervaded by animalcules—spores or minute seeds, and, perchance, they are vivified by some abnormal condition that fosters hatching into microbes, symptoms of disease are present, but it is not known that spores have anything to do with the origin of such diseases as Prof. Cook named, leaving out foul brood, which is *not a disease*—no more so than cases of poisoning, or the fermenting of "cider and sweet liquids." A fetus, while growing in the womb, may die—have occasionally died—yet the mother have no symptoms of disease. So with foul brood—the organic composition of bee-brood is radically different, in a chemical sense, from imago bees. Hence the poison—putrid fermentation—cannot act on matured organism while life exists. The moment life is extinct, the spores in the tissues begin to ply their *role*—hatch into microbes and multiply with astonishing rapidity, providing a warm temperature is present. All bodies will retain form and never change even after death, except for bacteria.

Whenever lesion of tissue occurs, food is generated for micro-organisms, and then the spores hatch into the forms that grow, multiply and feed on the diseased tissue. In cases of consumption, the tissue substance of some part of the lungs becomes ulcerated from some cause yet unknown, but usually preceded by symptoms of weakened vitality—symptoms which cannot be ascribed to germs.

Some years ago a microscopist discovered bacteria in the lungs of one who died with consumption. Straightway the finding was hailed to be the "unveiling" of a hitherto unfathomable mystery, but as yet no noise has been heard, as would be in the event a "sword" had been "revealed" that defends people from such diseases as Prof. Cook named; and since that discovery, the disciples of Prof. Cook's doctrine—I do not name him the father—claim that bacteria, in some form, directly and independently originate diseases.

With all due respect for Prof. Cook as an eminent scientist pertaining to the special branches that he is qualified to teach, I beg leave to question some of the doctrine which he advocated. I suppose Prof. Cook lays no claim to the profession of Pathologist, yet his Bulletin smacks of pathology, norology, and etiology—especially the latter. If Prof. C. is really competent to teach these sciences, it is very strange that he groups epidemic with endemic diseases, and includes non-contagious diseases into one and the same class, even including foul brood. It is not, as Prof. C. well knows, admitted by a majority of medical scientists, that consumption is the "result" of spores or microbes, nor is it admitted that the disease is contagious or transferable, except by inoculation.

Long ago Pasteur claimed that micro-organisms were the germ of splenic fever, and of late some refer the origin of epidemic diseases to the presence of germs. The recent researches of the eminent French biologists—M. M. Apostoli and Laquerriere—will prove to be a great medical discovery, perhaps (?). They claim that the antiseptic and destructive effects of a constant galvanic current on disease-producing germs and microbes, is adapted to the treatment of maladies in which no drug can kill or remove the parasite. Perhaps electrogalvanism is the "sword" that lays them low.

If Prof. Cook can unveil the "mysteries" and reveal a sword that lays them low, he would be crowned the peer of William Harvey, who, in 1628, discovered the circulation of the blood; and the former would have a niche in history on a plane with the latter.

It is no "mystery" of the time nor of late, but it is a well known fact that animate organisms are universally diffused over every part of the globe. Organic beings are found in the interior of the earth. Excavations, sunken deep shafts have revealed their forms, likewise, the smallest fossil organisms from subterranean strata many fathoms deep. Not only do lakes and inland seas abound with life, but, also, from unknown depths, in volcanic districts, arise thermal springs which contain living insects. Indeed, the atmosphere is charged with "tiny" spores. Were we endowed with a microscopic eye, we might see myriads of ethereal voyagers "on dress parade," wafted by on the breeze, as we now behold drifting clouds of aqueous vapor. Prof. Cook mentions:

> The forms that live on live animals and tissues, just as truly produce decomposition, disorganize the tissues, and this disease may be death. Such are the microbes that produce cholera, consumption (!) and diphtheria among people, and foul brood among bees.

Mark, he has it that the same forms—same form of bacteria—that live *on* live animals and tissues (even the skin is tissues) produce each of the named diseases. If his assertions are correct, one form of germs do all the harm, and they are ever present—"live *on* live animals and tissues." Prof. Cook fails to inform how it is that these "forms live" dormant *on* animals and tissues, and at a time, which they keep secret, start cholera, consumption, etc. Do these forms get mad, and, if desperately mad, size up Asiatic cholera? Certainly the Asiatic "forms" go in hugely livelier than the consumption "forms." This is one of the "mysteries" that science hath not "unveiled."

Concerning Asiatic cholera, the true pathology of the disease, or group of diseases, is by no means settled by medical scientists. The pathology of this affection comprises three divisions, viz: *a*, its morbid anatomy; *b*, its bacteriology; *c*, its chemistry. A case of summer complaint in America presents symptoms on the part of the bowels, on the part of the circulation, of the

respiration, the kidneys, the skin, and the nervous center, like Asiatic cholera, and practitioners find the different phases of the disease are legion.

The summer cholera in Asia is generally more acute than summer complaint here. The bowel symptoms are usually the most prominent. It does not seem rational to call a relatively mild case of summer *diarrhea*, and to call another cholera infantum, which has the same symptoms, and only the same symptoms as the former, but in a much more aggravated form.

The etiological consideration of these diseases, Prof. C. wholly ascribes to micro-organisms, but he does not offer any evidence or authority as corroborative of his naked assertion based on his fancy alone.

From what I have learned concerning these diseases, I will, without fear of contradiction, record the well known fact that it has not yet been shown that any of the forms of summer cholera are due to the action of a specific micro-organism multiplying in the blood or tissues. There certainly are bacteria in great plenty in the intestinal canal—the organisms which induce fermentations everywhere, whenever chemical elements combine in a way to favor their action. Chemical substances alone can produce all of the symptoms of cholera and other disease.

Every stool from a case of cholera or summer complaint is a fermenting mass. How do we know this? Because, in the first place, we have in the stool (or the chyme that precedes it) the materials to maintain fermentation; second, we have the micro-organisms to induce fermentation; third, we have the proper conditions of heat and moisture in the intestine to facilitate the fermentation; and, lastly, we have the results of the fermentation—the putrid products, and the sour-smelling, fatty acids.

I have thus followed Prof. Cook by way of review of his essay, which purports to be a Bulletin relating to Foul Brood. Right here I inquire, what relation do the diseases hold to foul brood? That which is known as foul brood was so named by German bee-keepers. They saw the larvæ in the colony rot, become a putrid mass, and they called it "*foul* brood;" and they saw cases somewhat unlike (different stages), and they fancied that there are two kinds—the moist and the dry. Father Langstroth in his best of any of the bee-books, treats of foul brood learnedly at the time. Since then the "mystery" has been unveiled, and swords were at hand to lay the destroyer low. I was the first who announced that foul brood was the result of bacteria (see the *Bee-Keepers' Exchange* of August, 1882). I here quote extracts from one of my communications, under date of 1882:

> As soon as life is extinct, spontaneous fermentation ensues, followed by changes of properties in the substance that formed the animate tissues arrising from new combinations of their principles. The fermenting process, called decomposing, rotting, is dependent upon certain conditions—a high temperature and moisture—sufficient moisture to act as a menstrum aids the process that develops or leads to generating the so-called foul-brood virus, which acts as a deadly poison on living tissues of the same organic matter—larvæ—but does not act on tissues of imago bees.
>
> In all cases where the fermenting process has been complete, decomposition ensues, and the sphacelus larvæ is true gangrene, every particle of which will, like leaven, take root by inoculation in healthy brood, and, like gangrene, spreads through to all the live tissues of the same organism—animate larvæ. If the fermentation of dead brood has proceeded rapidly, and reached a certain stage of change through evolution, it is putrefactive—foul brood—emitting a putredinous stench. Chilled brood may appear putrid to an inexperienced observer when the fermentation had not been such as is requisite to generate true "foul" or fermentive virus peculiar in its properties as brood virus.

Prof. Cook mentions that, "All of these (micro-organisms) cause decomposition of the material on which they work. The substances that arise in this decomposition either go to nourish the microbes, or are given off as excreta, just as we excrete carbonic acid in our life economy." Does he entertain the idea and aim to have us understand that decomposing substances afford food for microbes? Or are we taught by him that the "substances that arise" are given off as excreta—which?

He further mentions: "Thus in sweet liquids these (bacteria) cause fermentation, as when cider changes to alcohol, and then to vinegar (acid fermentation). In meat and other dead animal tissues they cause putrefaction. Rot, then, is simply the feeding of countless millions of these micro-organisms on the decaying tissue."

That last sentence is strictly correct, and foul brood is simply rot—but when did Prof. Cook learn the fact? If I correctly read the first edition of his treatise on bees, he did not "unveil" any of the "mysteries" concerning foul brood. It is less than one decade since I advanced the theory and claim that so-called foul brood is a fermentative bacteria rotting, and under certain circumstances originates spontaneously in foul brood. At the appearance of my communications they were even ridiculed. One of my essays was read in convention in 1882–83, and Mr. D. A. Jones, of Canada, remarked: "I doubt foul brood being a germ disease." Such was the opinion generally up to that time. Later on, that eminent scientist, Mr. Cheshire, of England, began his researches in scientific bee-culture, and has educated the world so that now doubts are not entertained on that point.

Prof. Cook does not broach the subject of the origin of foul brood, and, so far as I know, Mr. Cheshire ignores the subject. None of the authors of bee-books attempt to "unveil" the supposed mysteries of the origin of foul brood. Certain correspondents have mentioned that foul brood sometimes originates in colonies. They were cognizant of the fact, but they did not ascribe the factor or cause to the real source. A veteran and expert New York bee-keeper attributed the cause of foul brood originating, as it had in some of his colonies, to the brood being fed fermenting honey.

One very overweening scribe, who writes about everything of which he is uninformed, mentions this: "The origin of foul brood is in obscurity—there are two kinds—the moist and the dry; it is probable that it is imported in honey from the India Islands." The potato-bug certainly came from the Western regions—that is well known; but nobody knows that foul brood ever was imported, though perhaps it has been exported. History informs us that foul brood existed as a scourge in the palmy days of Aristotle.

The scribe alluded to, though indefatigable, has not "unveiled" one of the mysteries concerning bees or bee-keeping—yet he pompously ridiculed my essay on foul brood!

The changes that fermentation produces are mysterious and wonderful. It develops several different organic substances in passing through different stages, defined by authors as vinus, acetic and putrefactive, and the term is applied to other processes of change, as the panary fermentation or rising of bread. Vinus fermentation does not generate poison, but acetous (which follows vinus and terminates in the production of alcohol) is poisonous in the latter stage, especially so when transformed into ether and chloroform.

Besides the fermentation of vegetable substances caused by fungoid or spores, there is putrid fermentation of animal—animate tissues—the process of change beginning the instant vitality ceases to exist, even though only a small part of the whole tissues of the body be involved, as in cases of gangrene or mortification. After dissolution of the *whole* body, putrefaction begins, followed by "rot."

Knowing these facts, it is reasonable grounds for the belief—for the conclusion—that it is probable that the honey-bee larvæ are not only liable to putrid fermentation, but that larvæ, under circumstances that favor fermentative action, do proceed to poisonous rot—real virus, which, in case the poison touches live tissues of the same organic structure as that from which the poisonous matter was when

alive, inoculates—as truly as small-pox virus, and the whole body or mass becomes putrid by the putrifying germs attacking all brood adjacent.

I trust that I have thus made myself understood; that is, I have aimed to explain *how* it is a fact that foul brood is liable and does occasionally originate in a colony. How do I know such to be a fact? Because I have proved the fact by experiment. My limits will not allow me to give it in detail here, but I will do so in a future issue.

Richford, N. Y.

LOCATING HIVES.

Placing the Hives so that the Bees Mark their Location.

Written for the National Stockman

BY G. M. DOOLITTLE.

It is supposed by some that when the bees are put from the cellar, each colony must occupy the exact position or stand that it did the summer and fall previous, or else many bees will be lost by going back to their former location.

All who are at all familiar with the bees, know that the young bee when it comes out of the hive for the first time marks its location by turning its head towards the hive upon taking wing, when it commences to fly in front of the hive in circles, each circle growing larger as it goes further from the hive, until it is lost from sight. In this way the exact spot of "home" is located, after which no more precaution needs to be taken by the bee, for it seems to remember ever afterward where home is. For this reason it leaves the hive at all subsequent times in a direct line of flight, never looking at the hive at all, so that if the hive is afterward carried to a new location, the bees do not seem to know it (unless carried two or more miles away), but sally forth only to return to the exact spot where they first marked their home, there to die homeless wanderers.

Now while, as a rule, this is perfectly true, no matter whether the hive is moved at night or in the day-time, yet I find that there are two exceptions, one of which is in the case of a swarm, and the other is the first flight in the spring. While the bees seem to know where their old location was, so that the swarm, or bees in the spring, can return if they desire to, still a swarm does not so desire except from the loss of the queen, nor do bees in the spring, if put out in the manner about to be described; hence in putting out, I always place the hive where I wish it to stand, thus avoiding much inconvenience and extra work.

When I get ready to put the bees from the cellar, I first light the smoker and proceed with it and a spring wheelbarrow to the cellar-door, at which place both are left, when I go in and bring out one of the colonies and place it on the barrow. As soon as this is done I puff a little smoke in at the entrance of the hive, so as to keep the bees from running out and stinging me, which they are sure to do if no precaution is taken; and of all the bees to sting, those which are suddenly awakened from a long winter nap are the worst.

Again, all such bees as get out before the hive is placed upon its stand are lost, as they mark their location where they leave the hive, and so never find it again. Also the smoking causes them to be slower about coming out, so that swarming out and confusion are avoided. As soon as the smoke is puffed into the hive, the cellar door is shut, so as not to raise the temperature, and thus arouse the bees inside, when the hive is wheeled to where it is to stand during the summer, the entrance adjusted, and the cover put on.

In putting out, they are not all taken out at once, but I put out from 10 to 15 in the morning, scattering them well over the yard, and then as many more at night, placing these last put out around among those put out in the morning, and thus all mixing is avoided. I begin putting out about 4 o'clock in the afternoon, so that the bees can get through flying before sunset; and of course it is understood that the bees are only put out on pleasant days, with the mercury at 50° or above in the shade. In this way I continue on pleasant days until all are out.

After putting out it sometimes happens (especially if the weather is very warm) that the first put out will commence to rob or carry off the stores of those put out last, which are so busy with their cleansing flight that they do not seem to notice robbers. Robbing is not always confined to such colonies, but all weak colonies, whether wintered in the cellar or otherwise, are subject to be attacked in the spring, and I know of no one thing in bee-keeping that is more vexatious to the apiarist than robbing.

While to the experienced eye robber-bees are easily distinguished, yet those just starting out in bee-keeping are often perplexed to know whether their bees are being robbed or not, as young bees at play often resemble robbers. I know of but one sure way for inexperienced persons to tell when a colony of bees is being robbed, and that is by killing two or three of the suspected bees and dissecting them, so as to expose the honey-sac. If this sac is empty there is nothing wrong, but if you find a bee leaving a hive with its sac filled with honey, rest assured that robbing is going on, for bees in a normal condition should be always conveying honey to the hive, not from it.

To prevent robbing as far as possible, close the entrance to the weakest colonies, so that but one bee can pass at a time, and allow not over two inches in length of entrance to the strongest. If robbing has actually started, close the entrance so that only one bee can enter the hive at a time, leaving it thus until evening, so as little of the honey will be carried off as possible; and after all is quiet at night, carry the robbed colony to the cellar, leaving it there for a few days, until the bees forget the place, or are engaged in getting nectar from the now opening flowers, when the colony is to be returned to its former location. After trying all plans for the stopping of robbing, I much prefer this to any other.

Borodino, N. Y.

CLOVER HONEY.

The Season and Condition of the Bees in Iowa.

Written for the American Bee Journal

BY FRANK COVERDALE.

We have just passed through the white clover honey harvest, and it has proved to be almost a failure, there being no honey from clover. Bees, as a rule, last fall, were put into winter quarters heavy in stores, and came out of the cellar in good condition, and, in fact, those wintered on the summer stands were none behind, even when not protected. Brood-rearing went on finely—better progress in this direction could not be wished for.

Soft maple was first to bloom, and bees gathered a fair amount of pollen from it. Then the variety of willow that grows along the creeks and swampy places afforded a goodly amount of pollen.

Next in rotation was the upland willow—a variety that some years ago was planted in great numbers; from this source enough honey was gathered to last until fruit-bloom, but the latter yielded scarcely enough to keep the bees in good condition. Dandelion also afforded very little nectar; raspberry did better, and helped the bees a very little, and when clover came into bloom, rain was the order of every day during the most of its bloom, though the clover seemed to be full of nectar whenever the bees could get out. The weather was so warm

that vegetation was pushed right along; thus the main flow was soon over.

But I do not wish to lay all the blame to the bad weather in June. One-third of my bees had plenty of honey to keep up rapid brood-rearing from spring until now, and these same colonies produced, this season, an average of 40 pounds of comb honey, and of extracted 66 pounds. The other two-thirds of my colonies, which were in a starving condition in the latter half of May, during which time they ceased to rear much brood, thus reducing the colonies in numbers, rather than increasing the same—this indeed is half the cause of the failure, for the latter did not, on an average, store 10 pounds of surplus honey from clover. Is it not plain enough to see, that had I fed the last colonies, and kept up brood-rearing, I might have had a fair crop of clover honey, despite the poor season? Ten pounds of sugar per colony would have done the work, and if it should have made them as strong as the former, I would have 20 pounds of honey, clear, for the labor of feeding, which, in an apiary of 100 colonies, would have added $134 to the income from the bees; that is, not counting one's time or sections to hold the honey. This shows the great necessity of having rousing colonies for the honey harvest.

Welton, Iowa, June 14, 1890.

REVERSING.

The Objects of Reversing the Brood-Combs Explained.

Read at the Ohio State Convention

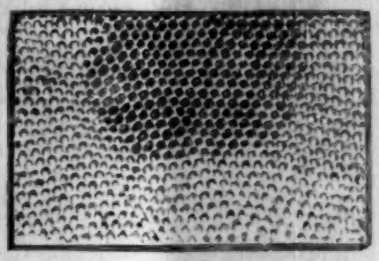
BY CHALON FOWLS.

My object in reversing the brood-combs, is to induce the bees to enter the sections more promptly, to prevent swarming by removing one of the causes of swarming, and to get the winter stores in part of the combs, instead of a little in all and not much in any.

Some five or six years ago, in one of his articles, Mr. G. M. Doolittle made this assertion: "The greatest secret of getting comb honey is to get the sections just as near to the brood as possible; and any plan which allows of one or more inches of sealed honey between the sections, is certainly defective." This was not disputed at the time, and has not been since to my knowledge. Assuming, then, that this is correct, it only remains for us to discuss the best means of forcing the brood right up to the top of the brood-frames.

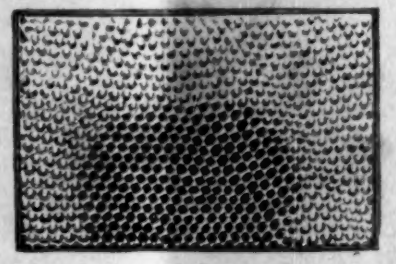
Now the old plan of extracting from the brood-combs, for this purpose, as everybody knows, is an entire failure. The plan of contracting the brood-chamber to 4 or 5 combs is successful, but involves the condition of having the brood-chamber narrower than the

Frame No. 1—Top.



super, and also involves leaving the brood-chamber without honey at the close of the season. This is a serious objection in my locality, as we seldom get much fall honey.

Making the brood-chamber shallow, with the combs only 4 or 5 inches deep, I have tried with new swarms, and it works well; but there is still at least one objection—there is no room for winter stores. Besides, in my case, I have more than a thousand nice worker-combs in wired Langstroth frames, and I cannot afford to throw them aside; and if I produce comb honey, I must use them as brood-



No. 1—After Inversion.

combs, and I must manage, in some way, to bring the brood to the top of the frames. This can be done by reversing, and still use a full set of combs.

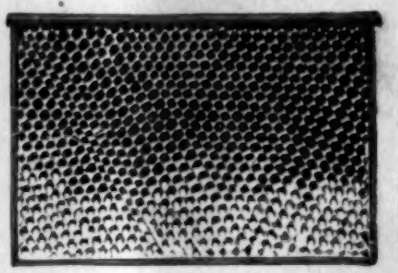
Unlike the contracting method, the size of the brood-chamber does not need to be guaged by the fertility of the queen, but the combs occupied by the queen will be solid with brood, and those which she does not occupy, will be solid with honey. To illustrate with a new swarm hived on combs or comb foundation:

In ten or twelve days the brood in the central combs will look something like engraving No. 1. If there is any capped honey above the brood in the central combs, it should be lightly mashed down with a knife or finger, and the combs reversed. The bees will, of course, remove the honey from this unnatural portion, giving the queen more room *in the same comb*, leaving the outside combs to be filled with honey.

In nine or ten days more, the central combs will be found to be solid with brood, but they need to be reversed now (see engraving No. 2), so as to throw the larvæ and eggs above, and the sealed brood below, where the bees are not inclined to store honey, and the queen will fill the combs with eggs as fast as the bees hatch, so that in nine or ten days more, the capped brood is all replaced by eggs and larvæ, when they are to be reversed again, and so on, as long as honey is coming in fast enough to crowd the queen.

The object is to reverse often enough so as to *never let any brood hatch in the*

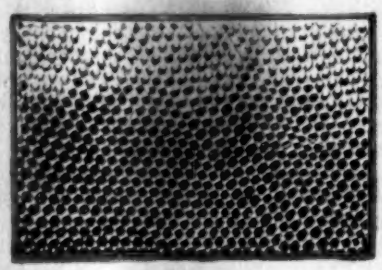
Frame No. 2—Top.



top of the frame. This makes it impossible for the bees to store any honey there, excepting, as before mentioned, in combs at the side.

I do not advocate reversing shallow combs—say 5 or 6 inches in depth—but only claim that reversing is an important aid in securing the best results in comb honey, with the majority of frames now in use—Langstroth size or deeper.

As a preventive of swarming, reversing succeeds just where the extracting method failed, as it gives the queen more room, and the honey removed goes into the sections instead



No. 2—After Inversion.

of the extracted honey. Besides, the next honey gathered must go into the sections, instead of being crammed in around the brood.

I commenced the use of reversible frames five years ago last spring, hiv-

ing 40 new swarms on them the first year, and I have gradually attached reversing corners to my old combs, so that they are nearly all reversible at present. Thus the conclusions that I have arrived at do not result from theory, but from practice.

Oberlin, Ohio.

PEACHES.

Bees and Peaches—Their True Relations.

Written for the Massachusetts Ploughman

BY GEO. A. STOCKWELL.

Fruit growers in different parts of the country declare periodically that bees destroy fruit, carry it away, and thus rob the owner.

One man relates that he found two pears on a tree that were hollow. The bees had found an opening in the broken skin of the pear, and had carried away the flesh, leaving the skin, the pear hanging from the branch, and having the appearance of perfect fruit. Other pears were partly excavated.

This may appear to be conclusive evidence against the bee—that the bee is a reckless forager, and a ruthless destroyer, but it is not conclusive evidence that the bee causes the fruit-grower much loss. Two whole pears! Two imperfect pears carried away by bees! What a calamity! Are not the bees entitled to two pears—two dozen pears—as a reward for labor that puts money in the fruit-growers' pocket? Possibly if there had been no bees, the yield of this orchard would have been less. The distribution of pollen by the bees increases the yield. This is an established fact.

But why did the bees carry off those two pears, or why did they not carry all of them away? Because the bees found the door invitingly open, out of which came a delightful odor, and also a sweet syrup trickling over the threshold. Of course they went in! All that sweetness running to waste when honey in the field was scarce! Eagerly they worked their way in, and took it all, leaving only the skin and stem of the pear. The pears thus robbed are imperfect pears, and would be of no value, except for home consumption, and perhaps would serve little for any purpose, and hence the bee as a fruit robber does not interfere very much with the prosperity of the fruit-grower.

A sound pear, plum, or peach has no more attraction for a bee than a piece of wood or stone. When the skin breaks, by which most fruit is made unfit for market, then the bee helps itself. While bees may carry away any sweet substance in liquid form rapidly, yet they can remove only a half drop at a time. Mrs. A., living near 16 colonies of bees began to make peach preserves one morning, and thoughtlessly invited the bees by throwing the peach-parings in an adjoining field. The bees came, but were not satisfied with parings when there was something better in the house. They entered through two open windows, and the picnic began.

A large milk-pan full of peaches and syrup stood on a table in the centre of the room. Mrs. A. was afraid of bees, and withdrew to another part of the house. The bees were not driven out till two o'clock in the afternoon, when the owner of the bees was found. Although many thousands of bees were in the room about three hours, they had not been able to carry away all the syrup between the peaches in the pan. Of course the bees, if they had had time, would have carried away everything except the pan and the peach-pits.

The same is true in a vineyard or an orchard. If the fruit ripe to bursting could remain indefinitely, the bees, if in sufficient force, would carry away all of it. The fruit has no attraction for bees until ripe enough for the juice to run, and not then unless the juice does run, and it will not run from sound fruit. When the fruit is ripe it is picked, and what the bees snatch in this short interval between ripening and picking, from unsound fruit, is not worth talking about.

In a vineyard where grapes are grown for wine—where broken grapes are as good as any if placed at once in the press, the bees may take a few hundred or thousand half drops, but as such broken grapes are gathered immediately, the total amount of the bees' stealings is hardly a factor, probably not equal to the amount of juice lost or wasted in going from the vine to the bottle.

Some men live on imagination and exaggeration, the latter, perphaps unintentional. In walking through a grapery, the owner seeing a dozen bees at work, exclaimed disconsolately, "The bees ruin the grapes! Not much use to raise grapes where there are bees!" Even grocers in cities complain that the bees carry off whole bunches of bananas, rob sugar barrels, and make free with a great quan of confectionery. The grocer may lose a few half drops of syrup from his fruit displayed at the door, or from an empty molasses hogshead in his back yard. That's all—such a trifling loss that only a prodigy in mathematics could compute the pro rata cost. To the enemy of bees, a bee is as formidable and destructive as an ox in a crockery store.

A sound pear was covered with honey and placed near the apiary. The honey was removed quickly, the pear "licked" dry, but the pear remained intact. If there had been a pin-hole break in the skin, only the skin and stem of the pear would have remained. Certainly the bees for the service they render, are entitled to a few half drops of syrup running to waste from fruit that has no market value.

Providence, R. I.

EXPERIENCE.

Bee-Keeping Mysteries—The Season in Iowa.

Written for the American Bee Journal

S. C. DIERDUFF.

I have learned that there seems to be a good deal of suspense about bee-keeping, and until some one can prove himself a true prophet, there will still be some mysteries to contend with. I commenced four years ago with 2 colonies, and secured a number of the very best bee books and periodicals, and can thank those for the information that I gathered I have multiplied my little apiary to 32 colonies of bees, besides giving my daughter 3 colonies, and my sister 4. I would say to all able correspondents, that a great deal of faith and confidence is placed in their experience. I, for one, the past spring, came nearly missing it, by following their directions in this way:

We do not always know what kind of stores our bees have, and we do not know what kind of a winter we will have. Our bees became very uneasy in February, and out they had to come, because I felt that they would wear themselves out. So we placed them on the stands, and found some of them in a tolerably bad condition. All of my 26 colonies came out alive, but 2 of them afterwards swarmed out, one having no honey, and the other no queen.

I have had but 6 swarms this season. In May I put on surplus cases on all the strongest colonies, and they all went to work in them nicely. Only one of them swarmed, but for the last three weeks the hot, dry winds kept the bees from finishing the capping of their honey.

This is a changeable climate. Last year, at this time, it was our best time for honey; now the flowers are nearly all dried up, but buckwheat is commencing to bloom. Last winter the bees did better out of the cellar. I believe we should put the bees in and out of the cellar according to the severity of the winters; that is the way I did with mine, and some of my

neighbors had from 4 to 24 colonies when I commenced—some of them have none now. Some lost because they left them out in the severe winters; some left them in the granary—all died last winter. Some lost because they left them in the cellar too long. I think that we must be governed by the changeable climate. The man that had 24 colonies has 42 now.

My last year's crop was a little over 500 pounds; I sold it all at 12½ cents per pound, and I could have sold that much more—all comb honey.

Yale, Iowa, July 17, 1890.

CONVENTION DIRECTORY.

1890. *Time and place of meeting.*

Aug. 19.—Northern Illinois, at Harlem, Ills.
D. A. Fuller, Sec., Cherry Valley, Ills.

Aug. 29.—Haldimand, at South Cayuga, Ont.
E. C. Campbell, Sec., Cayuga, Ont.

Sept 10.—Ionia County, at Ionia, Mich.
H. Smith, Sec., Ionia, Mich.

Oct. 29-31.—International American, at Keokuk, Ia.
C. P. Dadant, Sec., Hamilton, Ills.

Oct.—Missouri State, at Mexico, Mo.
J. W. Rouse, Sec., Santa Fe, Mo.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

International Bee-Association.

PRESIDENT—Hon. R. L. Taylor..Lapeer, Mich.
SECRETARY—C. P. Dadant.....Hamilton, Ills.

National Bee-Keepers' Union.

PRESIDENT—James Heddon..Dowagiac, Mich.
SEC'Y. AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

White Honey Harvest Past.

The season for white honey is past here (Grand river valley), and I do not think, after an examination of several hundred colonies, that they have exceeded 10 pounds of comb honey per hive. The difficulty is too cold nights and not sufficient dew. We expect a fall crop, which is usually of good quality here.

HARMON SMITH.

Ionia, Mich., July 17, 1890.

Bee-Keeping on Long Island.

The bees are doing well in this part of the country (mine are the only ones around). My first swarm escaped and took up its abode in a Negro meeting-house; my last also joined them. My 3 colonies built up exceedingly well, and I have hived 3 swarms from them, besides 2 escaping, and making one small swarm go back. That makes a total of 6 colonies. The white clover flow was immense here, but I did not get any surplus, on account of swarming. The golden-rod flow will soon be here, and then I expect something sweet from the hives.

The third swarm that issued from one of my hives, I made to re-enter the parent hive, first catching the queen and clipping her wing. I did this about 20 days ago, and have seen no increase in bees. Is that queen all right, or should she be superseded, and how, as I have only box-hives, which are accessible only by the flight entrance, and the entrance to the surplus chamber? The holes are round, and about one inch in diameter. What is to be done?

How is it that some people recommend Lizzie Cotton, while others run her down? The letter I forwarded from one of the men who gives his testimonial in her circular, praises her "sky high."

O. R. HAWKINS.

Bellport, N. Y., July 15, 1890.

[We cannot answer the question about Mrs. Cotton. We hope she has had enough experience now to deal squarely with her customers. The many complaints heretofore registered show that she did not do so then.—ED.]

No Surplus Honey.

There is absolutely no surplus honey in this part of Michigan as yet. Bees which have been neglected are dying of starvation. Colonies are being depopulated fast. There was no swarming.

(REV.) WM. ANDERSON.

Imlay City, Mich., July 16, 1890.

Very Small White Honey Crop.

The white honey harvest is closed here, and it will not exceed 10 pounds per colony. One hundred acres of Alsike utterly failed as a source of honey. There was plenty of bloom, but few swarms, and little honey.

B. H. STANDISH.

Evansville, Wis., July 19, 1890.

Hoping for a Fall Crop.

My bees are doing nothing. I have 101 colonies now from 70, spring count, and have taken only 117 pounds of comb honey. Bees are mostly in chaff hives. Everything was drying up here, but a big thunder shower and heavy rainfall last night has given us all hope for a fall crop of honey.

C. M. BURGESS.

Council Bluffs, Iowa, July 19, 1890.

Poorest Season for Years.

At this season we are looking for reports of the honey crop of the country. My 200 colonies of bees have not yielded one pound of surplus honey yet. I have only about 8 or 10 swarms, and no prospect of more. It is the poorest season for many years so far. Basswood bloom is nearly over, and no honey. We hope for a crop of fall honey. Farm crops are generally good.

F WILCOX.

Mauston, Wis., July 21, 1890.

The Nameless Bee-Disease.

DEAR EDITOR:—Please examine the bees which I send you, and report the trouble and remedy, if any. They came from a young colony that issued on July 4, and worked finely for ten days building fine white combs in all the frames. About five days ago I noticed some bees hopping around, much like grasshoppers; they were beautiful yellow bees, but I thought they were a little swollen; they would fly, or sometimes crawl out on the alighting-board, hop around a little, and now they are in a new hive, about 6 feet from the mother hive, and the same distance from a sister swarm that issued the third day after. There is nothing wrong with them.

Now if there is any danger of contagion, I will at once destroy them; they are from a fine strain of Italians, which I got last spring. They are as fine a race of bees as I ever saw. I enclose a few taken a little before death.

H. P. JONES.

Renovo, Pa.

By request, Prof. A. J. Cook examined the bees, and reports as follows concerning them:

This is what is called the "nameless bee-disease." Cheshire says it is caused by a bacillus, which he calls Bacillus Gatoni. I find evidence of bacilli in all the bees. What is very curious, all the bees have a thin honey-stomach, stomach and intestines perfectly full of granulated honey or sugar, while there is no sign of pollen-grains. It is very rare to find such a condition at this season. The remedy is to change the queens. I would put a new queen in this colony, and the other queen, if I prized her, I would put in another colony, just to try her. Then if she did no better, kill her.—A. J. COOK.

Only One-Fourth of a Crop.

The honey crop will not be over one-fourth in this section this season. At this date the white honey must be all gathered. Where is the honey to come from if wet weather spoiled it? Must not the price be much higher than last season?

A. A. HARRISON.

McLain, Pa., July 22, 1890.

Chloroforming Bees.

My 12 colonies of bees are doing fairly well in the Langstroth hives. I have 13 colonies in box-hives, which have stored no surplus honey at all, and would like to get rid of them. I do not know of any way but to kill them in the fall, which I really hate to do, and were I able to attend to them, I would transfer them. Could I smother them with chloroform, so they would not come to life again? Would it injure the honey?

D. A. MONTAGUE.

Buckingham, Ills., July 19, 1890.

[The bees may very easily be killed by chloroform without injuring the honey in the least, as it evaporates very speedily.—ED.]

Light Crop of White Honey.

The white honey harvest is very light in this locality this season.

T. S. BULL.

Valparaiso, Ind., July 19, 1890.

No Honey in Cedar Valley.

Our bees wintered well, had plenty of honey, bred up finely, and at the first of June gave promise of a crop of honey; but, alas, for expectations—the clover and basswood have gone by, and the bees will have to be fed, or starve, this winter; there is no honey in the Cedar valley.

THOS. TRACY.

Nashua, Iowa, July 19, 1890.

Too Dry Weather for Bees.

The bees did fairly well for two or three weeks, then it turned dry, and now it is just awfully dry. The late swarms will surely die if it does not rain soon. We had as fine a start in white clover as any one could wish to see, but, alas, it all dried up.

H. MANSPERGER.

Lewiston, Mo., July 19, 1890.

Filling the Sections Rapidly.

The bees are filling the surplus sections at a very rapid rate. The white clover is plentiful, and the farmers have sowed lots of buckwheat, so I look for a large honey-flow. My bees did their first swarming on June 25. Good weather favored us about June 16, and still continues. When it rained it was in the night, and the bees have lost no time. H. C. FARNUM.

Aristotle, N. Y., July 18, 1890.

No Large Honey Crop.

The honey-flow seems somewhat limited. There will not be a big crop this year. My bees swarmed not to exceed one-fifth, and new swarms will not store much surplus.

A. Y. BALDWIN.

De Kalb, Ills., July 21, 1890.

Small Crop of Honey.

The honey crop is not going to be as large as I expected, and, as far as I can see, it is so all over the county, on account of very bad weather the forepart of June, and a few days of extremely hot weather.

C. SCHLIESMAYER.

Pasadena, Calif., July 16, 1890.

Dead Brood.

My bees are in a very poor condition. The dead brood in the combs is of a yellowish and darker color. When they dry down at the bottom of the cells, the bees carry them out; but some do not dry down to the bottom—they make a thin scale about half way down. Occasionally there is one that is a little stringy. The disease would sometimes disappear, and in a few weeks it would re-appear. Will some one tell me what is wrong with them?

OTTO F. SEMKE.

Harrison, Kans., July 23, 1890.

[If it were the so-called foul brood fully developed, the offensive stench accompanying it would be unmistakable, and the cappings would be sunken, and have a small hole in them. Phenol is the most reliable remedy for the early stages of foul brood. When it is fully developed, fire is the only thing to be recommended for the whole outfit—hives, frames, bees and all.—ED.]

No Honey in White Clover.

The honey season is over in this locality (Western Pennsylvania), and, like many others, I have to say that it was a failure. About one-fourth of a crop of honey has been secured by those who managed their bees fairly well, and those who are not so well versed in bee-literature, much less, and some none at all; that is, so far as I have heard, and I have made some inquiry. This all took place amidst a sea of white clover, too. I never saw so much white clover before in my life. The fields were white in every direction, and yet no surplus honey! I assign two causes for the failure—first, there was no bloom until white clover came, and consequently the bees made no preparation to swarm until then, and it took place in the midst of the clover bloom; and, second, there was no honey in the last part of the clover bloom. We never knew it to fail to secrete honey before in this locality. I am selling my honey at 20 cents per pound. I have tested the bee-escape, and found it a success. I have invented one with a single bee space and cones, that works just as well, and, I think, better. I consider the bee-escape a very good invention. OSMAN M'CARTY.

Washington Co., Pa., July 21, 1890.

HONEY AND BEESWAX MARKET.

NEW YORK, July 7.—New Southern extracted is arriving freely, but the quality is poor, and prices are declining. We quote from 60@65 cents per gallon. New extracted orange blossom honey, 7@7½ cents. New extracted California white sage, 6@6¼c. California light amber, 5¼@5½c. Beeswax, scarce and firm at 29@30c.

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, July 15.—The receipts of new comb honey are light, and demand equal to the receipts. One-pound white comb is selling at 14@15c. Very little demand for extracted at present. Beeswax, 25c.

CLEMONS, MASON & CO.,
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CHICAGO, July 8.—Market is bare of honey of all kinds, both comb and extracted. New comb will bring 13c. A little fancy has been sold at 15c. Extracted from 6@8c. Weather is warm, but there is some demand. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

MILWAUKEE, July 14.—The demand for honey is good for this season of the year. The supply of old crop is fair—equal to the demand. We can quote: White 1-lbs., choice, 13@14c; medium white 1-lbs., 12@13c; dark 1-lbs., good, 10@11c; white extracted in barrels and half barrels, 7@7½c; white extracted in kegs and tin cans, 7½@8c; dark, in barrels and kegs, 6@6¼c. Beeswax, 28@30c.

A. V. BISHOP, 142 W. Water St.

DETROIT, July 8.—No new honey in the market, and no desirable old is left. It is quoted at 10@13c. Extracted, 7@8c. Beeswax, 27@28c.

M. H. HUNT, Bell Branch, Mich.

KANSAS CITY, June 13.—Market cleaned up on old comb and extracted, and new crop of comb arriving. We quote: White 1-lbs., 15c; dark, 11@12c; white 2-lbs., 12@13c; dark, 10@11c. Extracted, white, 6@7c; dark, 5c.

HAMBLIN & BEARSS, 514 Walnut St.

BOSTON, July 23.—Fancy 1-lbs., 16c; 2-lbs., 15c. Extracted, 8@9c. Honey sales are very slow. We have recently received a shipment from Michigan, of very fine stock, which is an ample supply for us for the summer.

BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI, July 9.—Demand is good for the new crop of extracted and comb honey. Judging by present arrivals, there has been a good crop harvested. Extracted brings 5@8c. Comb honey, 12@15c for best white. Beeswax, in good demand at 24@26c on arrival.

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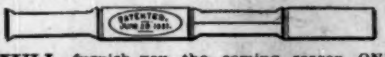

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